

ABSTRACT OF THE DISCLOSURE

A voltage supplying device includes a reference voltage generating circuit having a ladder resistance circuit to which a plurality of resistors are connected in series, which outputs a plurality of voltages divided in the ladder resistance circuit as a plurality of gamma-corrected reference voltages and a plurality of first impedance conversion circuits which perform impedance conversion on the plurality of reference voltages from the reference voltage generating circuit and output the converted voltages. The voltage supplying device also includes a voltage selection circuit having a plurality of analogue switches one of which is turned on based on grayscale data, which selects one of the plurality of reference voltages from the plurality of first impedance conversion circuits, a second impedance conversion circuit which performs impedance conversion on a voltage from the voltage selection circuit and outputs the converted voltage, a first switching element for blocking an output of the second impedance conversion circuit and a first bypass line for shorting input and output lines of the second impedance conversion circuit. The voltage supplying device further includes a second switching element provided on the first bypass line, a plurality of third switching elements for blocking an output of the plurality of first impedance conversion circuits, a plurality of second bypass lines for shorting input and output lines of the respective plurality of first impedance conversion circuits and a plurality of fourth switching elements provided on the respective plurality of second bypass lines. Furthermore, the first switching element is turned on and the second switching element is turned off in the first period of the charging period, and the first switching element is turned off and the second switching element is turned on in the second period of the charging period which follows after the first period.